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8 Attorneys for Defendant
APPLE INC.

9
10 UNITED STATES DISTRICT COURT
11 NORTHERN DISTRICT OF CALIFORNIA
12 SAN JOSE DIVISION

13
14 IN RE APPLE & AT&TM ANTI-TRUST
LITIGATION

CASE NO. C 07-5152 JW (RS)

**CONFIDENTIAL DECLARATION OF
JOHN WRIGHT IN SUPPORT OF
DEFENDANT APPLE INC.'S OPPOSITION
TO MOTION TO COMPEL PRODUCTION
OF DOCUMENTS, INCLUDING IPHONE
SOURCE CODE**

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22 **PUBLIC REDACTED VERSION**
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1 I, John Wright, declare as follows:

2 1. I am employed as Director, Platform Technologies at defendant Apple Inc.
3 (“Apple”). I submit this declaration in support of Apple’s Opposition to Plaintiffs’ Motion for an
4 Order Compelling Apple to Produce Documents, Including iPhone Source Code.

5 2. I have been employed at Apple employee since 2004. Prior to joining
6 Apple, I worked at Motorola, Data General, Silicon Graphics and Sun Microsystems, among other
7 companies, with a focus on software development of operating systems across diverse platforms.
8 I received a B.S. degree in computer science from the University of Illinois.

9 3. As Director, Platform Technologies at Apple, my responsibilities primarily
10 include software development, security and management of Apple’s iPhone Operating System
11 (iPhone OS) and Mac OS X©. In this capacity, I supervise and manage a development team of
12 approximately engineers. I have worked on the software development, security and
13 management of Apple’s iPhone OS since well before the initial announcement of the iPhone in
14 January 2007.

15 4. I understand that plaintiffs in this lawsuit are making claims against Apple
16 related to version 1.1.1 of Apple’s iPhone OS, which was released on or about September 27,
17 2007. Specifically, I understand that plaintiffs allege that iPhone OS version 1.1.1 “bricked”
18 (rendered inoperable) or otherwise damaged some iPhones that were unlocked by users or
19 jailbroken by users and upon which unauthorized software applications had been downloaded. I
20 understand that in pursuit of their 1.1.1-related claims, plaintiffs are seeking to compel Apple to
21 produce large portions of iPhone OS version 1.1.1 source code, in addition to source code related
22 to iPhone OS version 1.1.1.

23 5. have reviewed the six categories of source code that plaintiffs are seeking
24 in their motion to compel. Although plaintiffs did not submit a declaration from a software
25 engineer explaining why review of the particular categories of source code is relevant to
26 plaintiffs’ claims, Apple does not object to production of certain of plaintiffs’ categories, and has
27 been and remains willing to allow review of those categories of source code subject to: (i) the
28 strict security protections and protocols agreed to by the parties, (ii) the consent of third-party

1 Infineon Technologies AG as to appropriate review of its source code, and (iii) appropriate
2 restrictions and confidentiality measures being followed with respect to the consultant plaintiffs
3 intend to have examine the code. However, the bulk of plaintiffs' categories go far beyond what I
4 believe, based on my work on iPhone OS, could be relevant to plaintiffs' claims. Moreover, given
5 the competitive sensitivity of source code in general, and iPhone OS source code in particular, the
6 overly broad requests for source code cause me substantial concern.

7 6. In order to provide the Court with a framework to address the relevancy and
8 appropriateness of plaintiffs' categories, I will first briefly describe the features of the iPhone OS,
9 as well as its great significance to Apple and the strict security mechanisms Apple has in place for
10 this source code at the heart of its revolutionary iPhone. I will then address, in turn, each of the
11 six categories of source code that plaintiffs have requested, in addition to plaintiffs' request for
12 related documents.

13 7. The iPhone OS is the operating system developed by Apple for the iPhone
14 and iPod Touch. The OS is the key operational component of the iPhone, and offers a number of
15 functions or services to application programs and users. Application programs access these
16 functions and services through "application programming interfaces" (APIs). By invoking these
17 APIs, an application program can request a service from the OS (such as reading or writing data),
18 pass parameters, and receive the results of an operation. Users may also interact with the OS
19 using the device's graphical user interface (GUI), which is generally considered to be part of the
20 OS itself.

21 8. The OS is itself comprised of numerous components that are responsible for
22 (i) handling the details of the operation of the device's hardware and (ii) managing and
23 coordinating activities and operations that are necessary for the making and receiving of phone
24 calls and for application programs (such as email, browser, iPod and calendar) to execute on the
25 device. One such component is a portion of the device known as the "baseband processor" or
26 "baseband chip" (and corresponding baseband firmware), which is used to, among other things,
27 connect to a telephone network and to utilize services on the network. Other components include
28 code relating to the main applications provided by the iPhone, including Mail, Safari, and iPod, as

1 well as Messages, Calendar, Photos, Camera, YouTube, Stocks, Maps, Weather, Clock,
 2 Calculator, Notes, Settings, iTunes, and Contacts. Still others provide the critical frameworks
 3 within which these applications (as well as third party applications) can function, which includes
 4 running the multi-touch functionality of the iPhone, enabling multimedia services for the device,
 5 providing support for the iPhone's accelerometer, camera, video playback and audio
 6 recording/playback functions, and so on.

7 9. Apple's source code for its iPhone OS is a highly confidential and
 8 proprietary trade secret, and comprises a core asset of Apple's iPhone business. The iPhone OS is
 9 based on Apple's Mac OS X© operating system. It was designed not just to enable telephone
 10 calls, but specifically to provide a rich and unparalleled mobile computing platform so that Apple,
 11 applications developers and iPhone users could all benefit from a very wide range of functionality.
 12 The significance of the iPhone OS to Apple's entry into the cell phone industry, and to its long-
 13 term product strategy, cannot be overstated. The iPhone, and the ecosystem that has developed
 14 around it, has transformed and revolutionized the cellular telephone industry. The iPhone OS at
 15 the center of the iPhone has been instrumental in this.

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In addition, third parties provide some of the code which is critical to the functioning of the iPhone.

13. As noted, I understand that plaintiffs in this lawsuit are raising certain claims related to Apple's development and release of iPhone OS version 1.1.1. Specifically, I understand that plaintiffs are alleging that: "[i]n response to consumers exercising their legal right to unlock their iPhones or to install software applications that competed with Apple's, on September 27, 2007, under the guise of issuing an 'upgraded' version of the iPhone operating software, Apple knowingly issued and caused transmission of a purported update to the iPhone operating software, known as Version 1.1.1, which "bricked" (that is, rendered completely inoperable) or otherwise damaged some iPhones that were unlocked or had downloaded competing software applications." RCAC ¶ 5, Mot. To Compel at 4.

14. I understand that, in pursuit of their claims related to iPhone OS version 1.1.1, plaintiffs have requested that Apple produce the following source code of Apple's iPhone OS:

"(1) the source code for the kernel, Core OS layer and Core Services layer of Operating System 1.1.1;

(2) the source code for the Media and Cocoa Touch layers of Operating System 1.1.1, excluding however source code which deals exclusively with the following iPhone components: Calculator, Calendar, Camera, Clock, Compass, Mail, Maps, Message, Notes,

1 Photos, Stocks, Text Messaging, Voice Memos, Weather, YouTube, iPod, iTunes, and Bluetooth;

2 (3) the source code for the baseband firmware that interacted with
3 Operating System 1.1.1;

4 (4) the source code for Purple Restore, the engine that interacts with
5 Operating System 1.1.1 to update the operating system;

6 (5) the source code for the iPhone baseband updater called BBUpdater,
7 which is a command line tool used for flashing the iPhone's baseband chip during installation of
8 Operating System 1.1.1; and

9 (6) the source code for the bootroms associated with Operating System
10 1.0.2 and Operating System 1.1.1, including baseband bootrom, ARM bootrom, ARM Low-Level
11 Bootloader, and ARM iBoot.”

12 15. I understand that plaintiffs claim that the categories of code requested
13 above “are likely to contain or lead to the discovery of relevant code,” but have not elaborated in
14 any respect as to why such source code is potentially relevant to their claims. In particular, I
15 understand that plaintiffs have not provided a declaration or specific submission, from anyone
16 with a computer science background, explaining why any of the above categories of code relate to
17 the subject matter of this lawsuit. Instead, my review of plaintiffs’ categories leads me to
18 conclude that plaintiffs have used broad terms to describe and seek the code of essentially all of
19 iPhone OS version 1.1.1 (minus code for some, but not all, of Apple’s applications).

20 16. Some of plaintiffs’ categories—those involving the baseband firmware—
21 appear to seek code that is potentially relevant to their 1.1.1 claims. That is because, based on my
22 work on development of the iPhone OS, I know that certain hackers circulated software designed
23 to unlock Apple’s original 2G iPhone that altered the baseband firmware and/or corresponding
24 data. As a result, iPhone OS version 1.1.1 (or any software update for that matter) could not be
25 successfully installed because portions of the baseband firmware and/or corresponding data had
26 been altered by those particular unlocking hacks. I am unaware of any “jailbreaking” hacks that
27 modified the iPhone and resulted in “bricking.” (i.e., rendered the iPhone completely inoperable).
28 Since plaintiffs’ claims involve users who made changes to the baseband firmware and/or

1 corresponding data, Apple has already indicated to plaintiffs that it has no objection to the
 2 production of baseband-related code—the baseband firmware sought by Request (3), the
 3 BBUpdater sought by Request (5), and the “baseband bootrom” portion of Request (6). Such
 4 production would, as I understand it, be subject to (i) Apple’s strict security protocols for such
 5 review, which plaintiffs have agreed to, (ii) the consent of Infineon, which owns the proprietary
 6 baseband firmware and baseband bootrom code in question, as to the appropriate portion of such
 7 code to be provided, and (iii) appropriate restrictions and confidentiality measures being followed
 8 with respect to the consultant plaintiffs intend to have examine the code.

9 17. In my view based on my work on the iPhone OS, the remainder of
 10 plaintiffs’ requests are overbroad, and not tailored so as to only seek code relevant or potentially
 11 relevant to their 1.1.1 claims. Instead, plaintiffs’ remaining requests seek, as a general matter,
 12 code that governs and manages the operational aspects of the iPhone and its applications. This is
 13 code that runs the actual iPhone and the many applications on it, and not code that would have had
 14 any impact or potential impact on plaintiffs’ claims of an unlocked iPhone’s “bricking” during the
 15 process of a user updating their iPhone OS to version 1.1.1. Plaintiffs provide no explanation for
 16 why all such “operational” code is relevant or necessary to the pursuit of their claims, and I am
 17 aware of none. Given the importance of the iPhone OS code to Apple and its competitive
 18 position, I respectfully request the opportunity to comment on any submission by a computer
 19 science expert retained by plaintiffs before the Court rules on plaintiffs’ motion to compel.

20 18. Specifically, plaintiffs’ Category (1), for “the source code for the kernel...”,
 21 is significantly overbroad in my view. The kernel is the main operating component of the iPhone
 22 OS, serving as the critical bridge between the hardware components and the applications/User
 23 Interface of the iPhone.

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 28 In sum, the

1 kernel manages the iPhone's system resources and processes and essentially determines when a
 2 given application can use these resources. And plaintiffs have made no efforts to date to identify
 3 which, if any, portions of the kernel may be relevant, and why.

4 19. Plaintiffs' request for the "Core OS layer and Core Services layer," also in
 5 Category (1), is similarly overbroad. Although these terms are not generally used by the iPhone
 6 OS development team, plaintiffs appear to have obtained them from an Apple developer website
 7 page, which provides members of Apple's iPhone Developer Program (launched in Spring 2008,
 8 long after iPhone OS version 1.1.1 was released) with overview descriptions of the iPhone
 9 development platform in order to allow such developers to make appropriate use of the APIs that
 10 allow applications for the iPhone to work (but not making source code available, of course).
 11 "Core OS layer," as used on that webpage, is rough shorthand for the OS kernel and the low-level
 12 libraries used to access the kernel's services. The request is therefore subject to the same
 13 overbreadth concerns described above. "Core Services layer," as used on that webpage, refers to
 14 processes and functionalities that exist for use in developing and implementing third-party
 15 applications (such as basic application data types, interfacing with applications databases such as
 16 SQLite, and so on) for the current iPhone OS (now at version 3.1.2). There was no separate
 17 external "Core Services" layer associated with iPhone OS version 1.1.1.

18 20. In short, plaintiffs' Category (1) seeks code dealing with the operational
 19 aspects of the iPhone and its applications.. But a request for all this code, with only a conclusory
 20 assertion that it is "likely to contain or lead to the discovery of relevant code," does not seem
 21 reasonable given plaintiffs' allegations.

22 21. Plaintiffs' Category (2) is for "the source code for the Media and Cocoa
 23 Touch layers of Operating System 1.1.1, excluding however source code which deals exclusively
 24 with the following iPhone components: Calculator, Calendar, Camera, Clock, Compass, Mail,
 25 Maps, Message, Notes, Photos, Stocks, Text Messaging, Voice Memos, Weather, YouTube, iPod,
 26 iTunes, and Bluetooth." This category similarly seeks code that has no relation whatsoever to
 27 plaintiffs' allegations of bricking (i.e., rendering the iPhone completely inoperable)

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6 22. In addition, while plaintiffs have appropriately excluded from their request
 7 irrelevant code dealing with a number of Apple's iPhone applications (such as Calculator,
 8 Calendar, Camera, and so on), they inexplicably do not exclude other irrelevant applications, such
 9 as Safari (the iPhone's web browser) or Contacts (the application which contains the user's
 10 address book). The code that comprises and runs all of these applications is irrelevant to
 11 plaintiffs' "bricking" allegations.

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19 24. Plaintiffs' Category (6) seeks "the source code for the bootroms associated
 20 with Operating System 1.0.2 and Operating System 1.1.1, including baseband bootrom, ARM
 21 bootrom, ARM Low-Level Bootloader, and ARM iBoot." As noted above, Apple does not object
 22 to plaintiffs being provided with source code review of the baseband bootrom, subject to (i)
 23 Apple's strict security protocols for such review, which plaintiffs have agreed to, (ii) the consent
 24 of Infineon, which owns the baseband bootrom code in question, as to the appropriate portion of
 25 such code to be provided, and (iii) appropriate restrictions and confidentiality measures being
 26 followed with respect to the consultant plaintiffs intend to have examine the code.

27 25. The code for the "ARM bootrom, ARM Low-Level Bootloader, and ARM
 28 iBoot," on the other hand, is not relevant to plaintiffs' claims.

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bootrom, ARM Low-Level Bootloader, and ARM iBoot have nothing to do with the baseband portions of the iPhone, which are the only portions that relate to plaintiffs' "bricking" allegations. I understand plaintiffs have presented no specific evidence to the Court for why the ARM bootrom, ARM Low-Level Bootloader, and ARM iBoot are relevant to the iPhone OS version 1.1.1 "bricking" allegations, and I am aware of none.

26. I understand that in addition to the above code, plaintiffs are also requesting that Apple produce (1) the internal engineering documentation for each of the above software; and (2) the manual and the software development kit for the Infineon chip. As to the former, I understand that Apple has already produced relevant documentation several months ago. As to the latter, third-party Infineon (which has received a subpoena for this information as well) is best suited to provide the manuals they have for that chip, and we have no knowledge of any "software development kit for the Infineon chip."

I hereby certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed on December 1, 2009 in Cupertino, California.

/s/ John Wright
John Wright

Authority for and concurrence in the filing of this declaration has been obtained from the signatory, pursuant to General Order 45(X)(B).

SF730109